"Ag Tables" Instructions

(These tables can be found on your CD in the spreadsheet folder.)

In general, data entry boxes are white, and calculated or copied boxes are light gray. Only white boxes require input, if you are using the spreadsheet provided.

Table 1A. Surface Water Supply (this information is requested in section 2A andf 2C).
The numbers in this table should be the best information available on how much water actually entered the District Distribution System originally by surface flows.

Measured or calculated numbers for this table are expected. Select a method below that best describes the method used to find each quantity. Fill in the row marked "Method" with the appropriate method definition number. If two methods are used for one supply, select the predominant one. For some flows, there may be no flow rate or volumetric measurement. In this case, estimate the flow, and fill in the appropriate method.

Make sure all the incoming surface water flows are represented. Water transferred in and small miscellaneous flows, may be lumped together in the "Other" column. This table should not include urban recycle flows or agricultural return water pumped back into the canals.

Method Definitions:
M1 Measured summation from calibrated measuring devices, accurate to within +/- 6 percent.
M2 Measured summation from calibrated measuring devices.
M3 Measured summation from measuring devices.
C1 Calculated (more than summation) using information from calibrated devices (such as the difference between measurements upstream of diversion and down stream of diversion).
C2 Calculated (more than summation) using information from measuring devices.
C3 Calculated using estimates from pump times and energy usage.
E1 Estimated using measured information from similar conditions.
E2 Estimated using historical information.
E3 Estimated using observation.
O1 Other (attach a note with descriptions of other methods used).

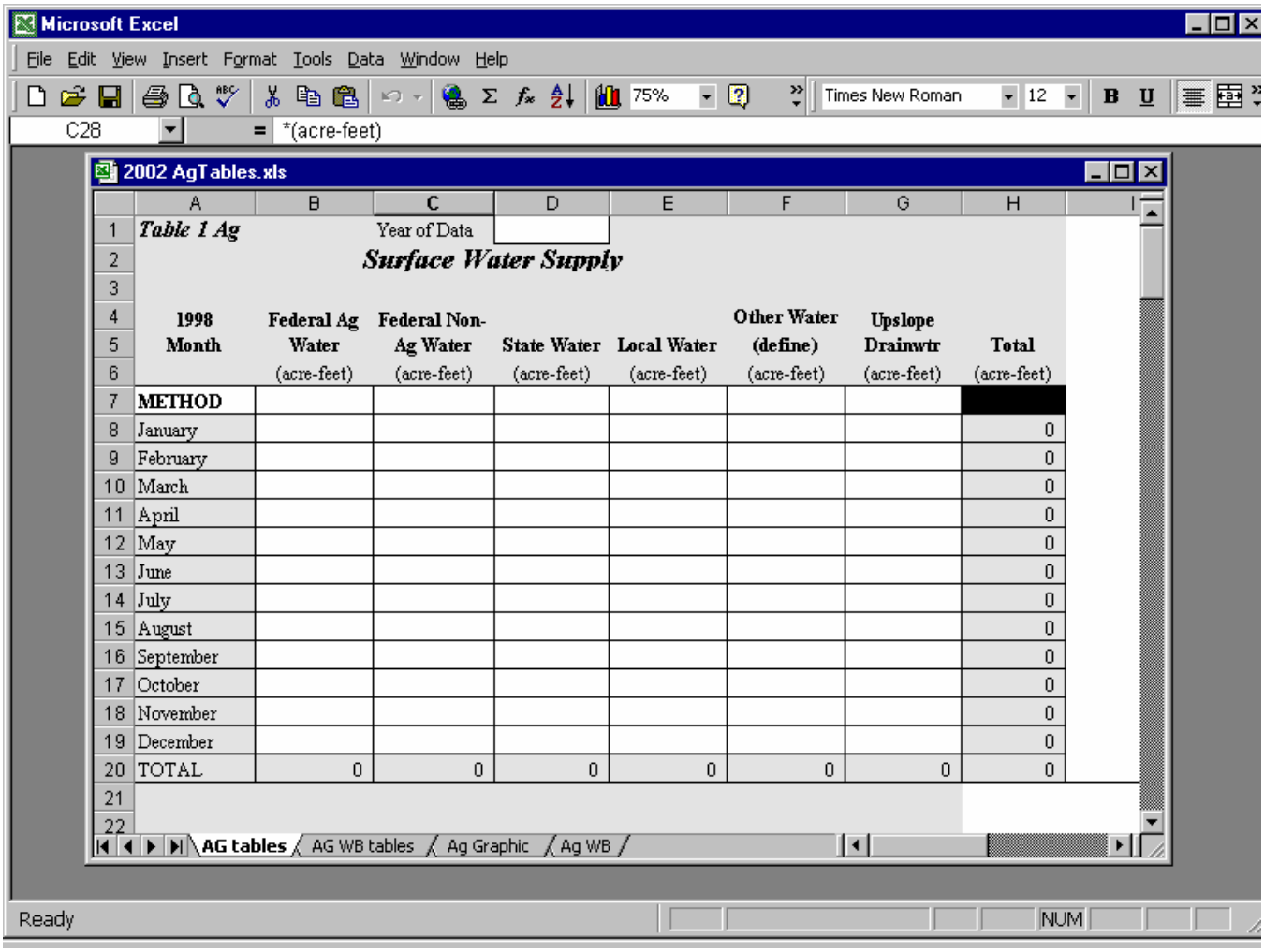


Table 2A. Ground Water Supply (this information is requested in section 2B).
The numbers in this table for the district pumping should be calculated or measured. For private pumping, an estimate of volumes pumped is normally used. Choose a method from the definitions provided in 1A, and fill in the row marked "Method" with the appropriate method number. If a yearly total is the best estimate available, it should be distributed over the months based on experience. The difference between district and private ground water is determined by how it was delivered. If the water is pumped from private wells into the District Distribution System, then it should be included as district ground water.

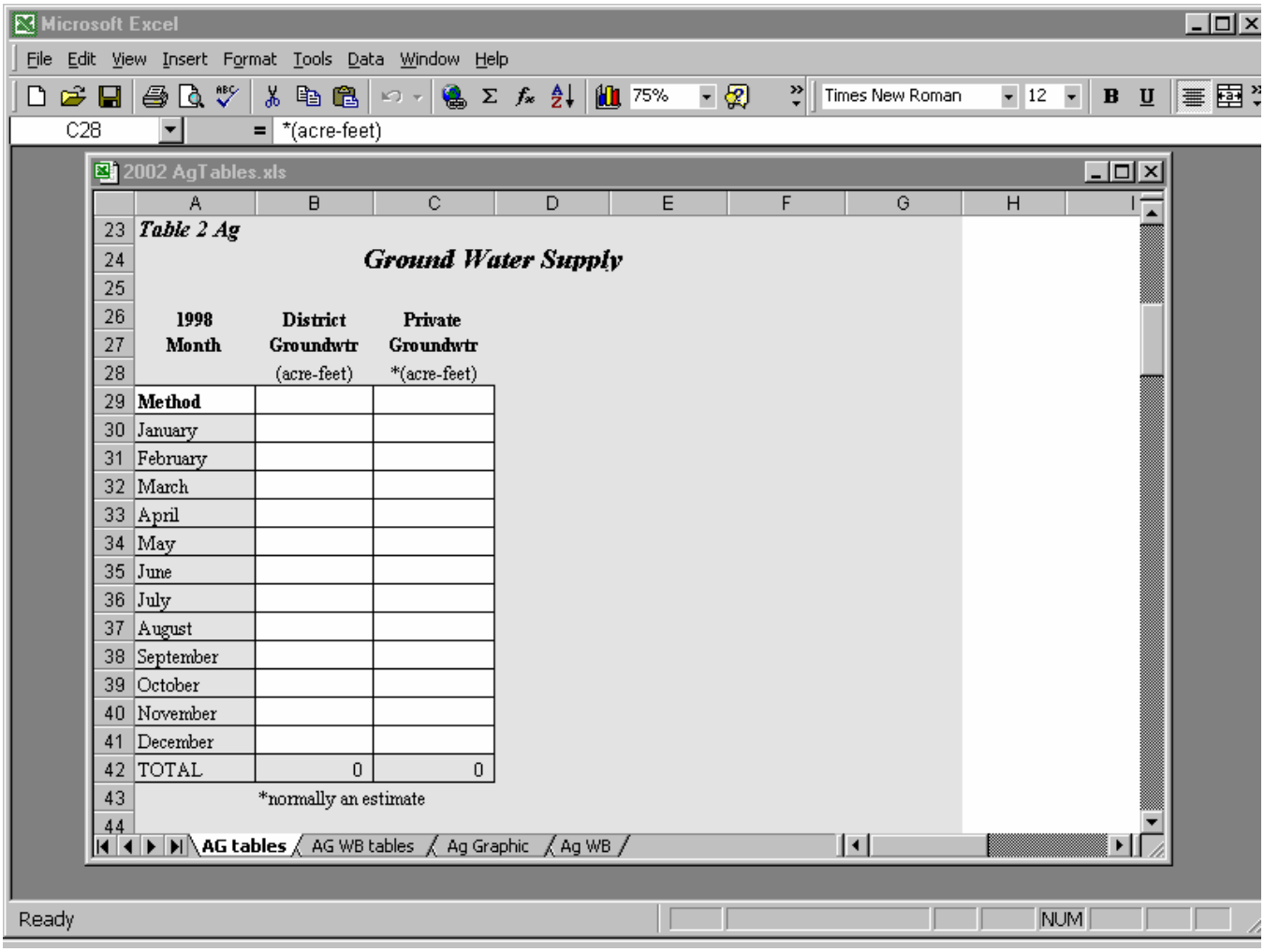
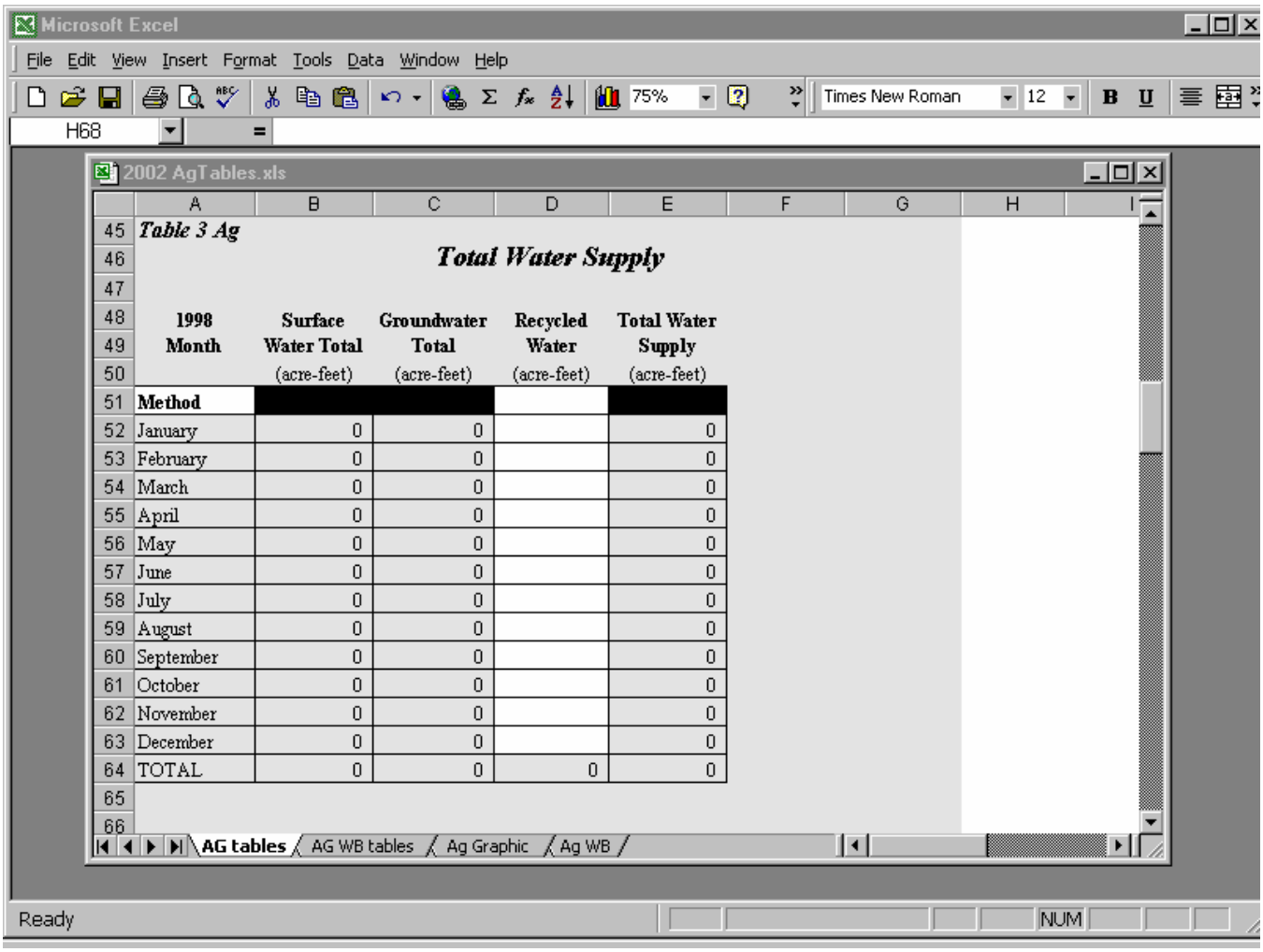


Table 3A. Total Water Supply (this information is requested in section 2A, B, and C). Most of the information in this table was entered previously except for "Recycled Urban." If you are using the computer spreadsheet, all the numbers previously entered are automatically copied to this table as indicated by light gray boxes. The "Recycled Urban" column should be filled out only for urban outflow that is delivered into the District Distribution System. Agricultural return water is accounted for later. Fill in the method number using the definitions provided in 1A.



1998 Month	Surface Water Total (acre-feet)	Groundwater Total (acre-feet)	Recycled Water (acre-feet)	Total Water Supply (acre-feet)
Method				
January	0	0		0
February	0	0		0
March	0	0		0
April	0	0		0
May	0	0		0
June	0	0		0
July	0	0		0
August	0	0		0
September	0	0		0
October	0	0		0
November	0	0		0
December	0	0		0
TOTAL	0	0	0	0

Table 4A. Distribution System (this information is requested in section 2G, part 2).
The first column should have the name or number of part of the Distribution System, such as Canal T-2, or Lower Reservoir. In the "Length" column, enter the length of canals and leave the box empty for reservoirs. In the "Surface Area" column, enter the approximate surface area for both reservoirs and canals. In the "Size" column, enter the volume held at full capacity for both reservoirs and canals. In the "Seepage" column, enter the estimated seepage. In the "Precipitation" column, enter the estimated precipitation that fell on the surface of that part of the distribution system. In the "Evaporation" column, enter the estimated evaporation from that part of the surface of the distribution system. In the "Spillage" column, enter the estimated amount of unrecovered spillage. Spillage is recovered if it re-enters the distribution system later.

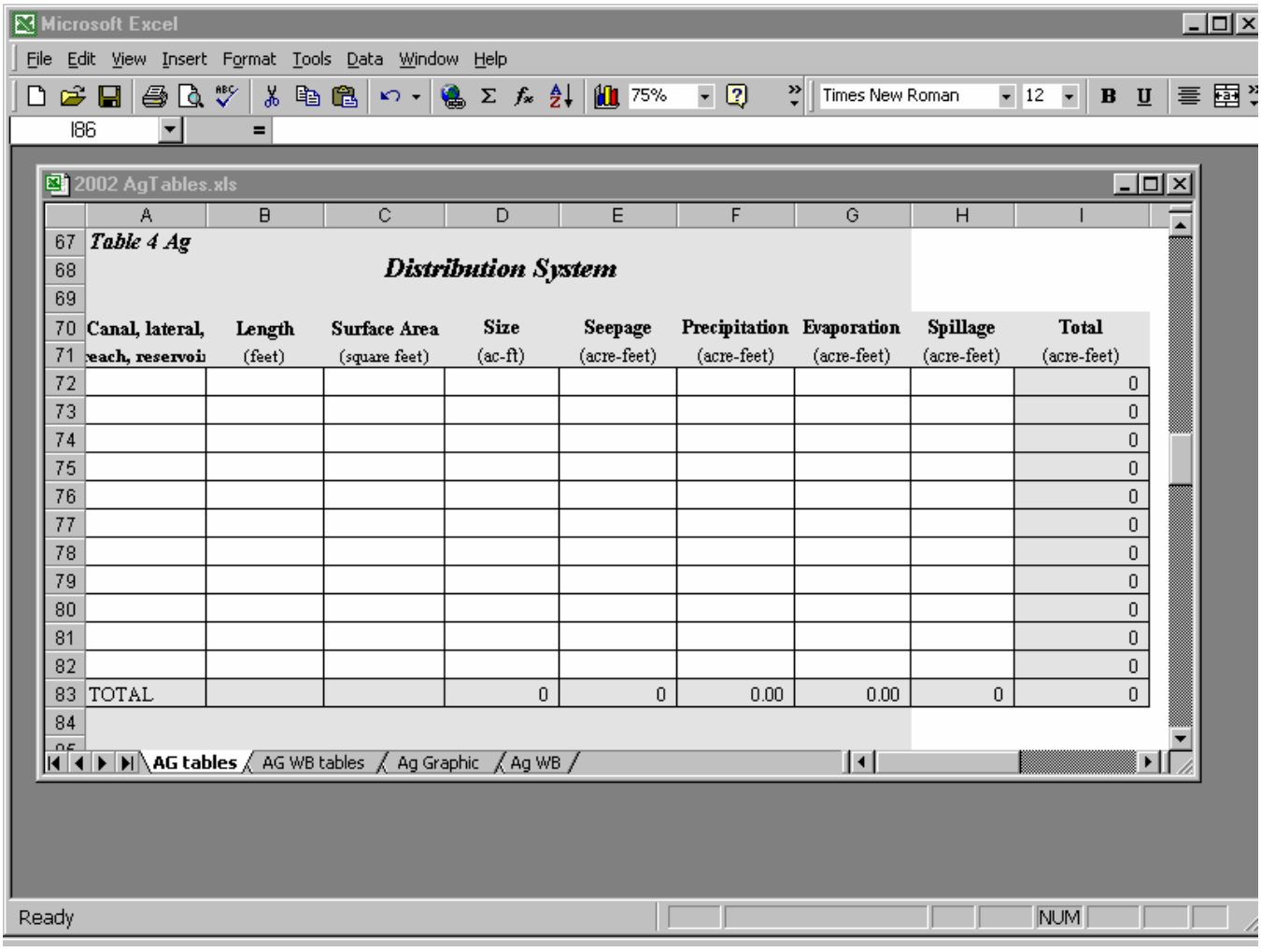


Table 5A. Crop Water Needs (this information is requested in section 2E).
The first column should list the crops grown in the district (use the crop list provided in Attachment C of the *Planner*). For each crop, list the most common irrigation method, irrigated acres of the crop, crop evapotranspiration (ET_{crop}), leaching requirement, water used for cultural practices (frost protection, pre-irrigation, etc.), and an estimate of effective precipitation. It is possible for the total acres to exceed the size of the district due to double cropping. Table 5 will combine these values to determine the total water demand of each crop. You may wish to combine crops grown on less than 5 percent of the total irrigated acreage. To combine crops, determine an average ET_{crop} leaching and cultural requirement, and effective precipitation for this group of small acreage crops. The ET_{crop} for crops in your area can be found using the California Irrigation Management Information System (CIMIS) at http://wwwdpla.water.ca.gov/cgi-bin/cimis/cimis/hq/main.pl, Department of Water Resources (DWR) CIMIS Database, www.wateright.org, Bulletin 113-3 (April 1975), or obtained from the local farm advisor. The University of California Cooperative Extension (UCCE) can also provide information on coefficients required to determine ET_{crop} and estimating water used for leaching and cultural practices. Effective precipitation by crop should be determined for local conditions. This information can be obtained from the Cooperative Extension in your area, neighboring districts, DWR field specialists, or your area office water conservation specialists.

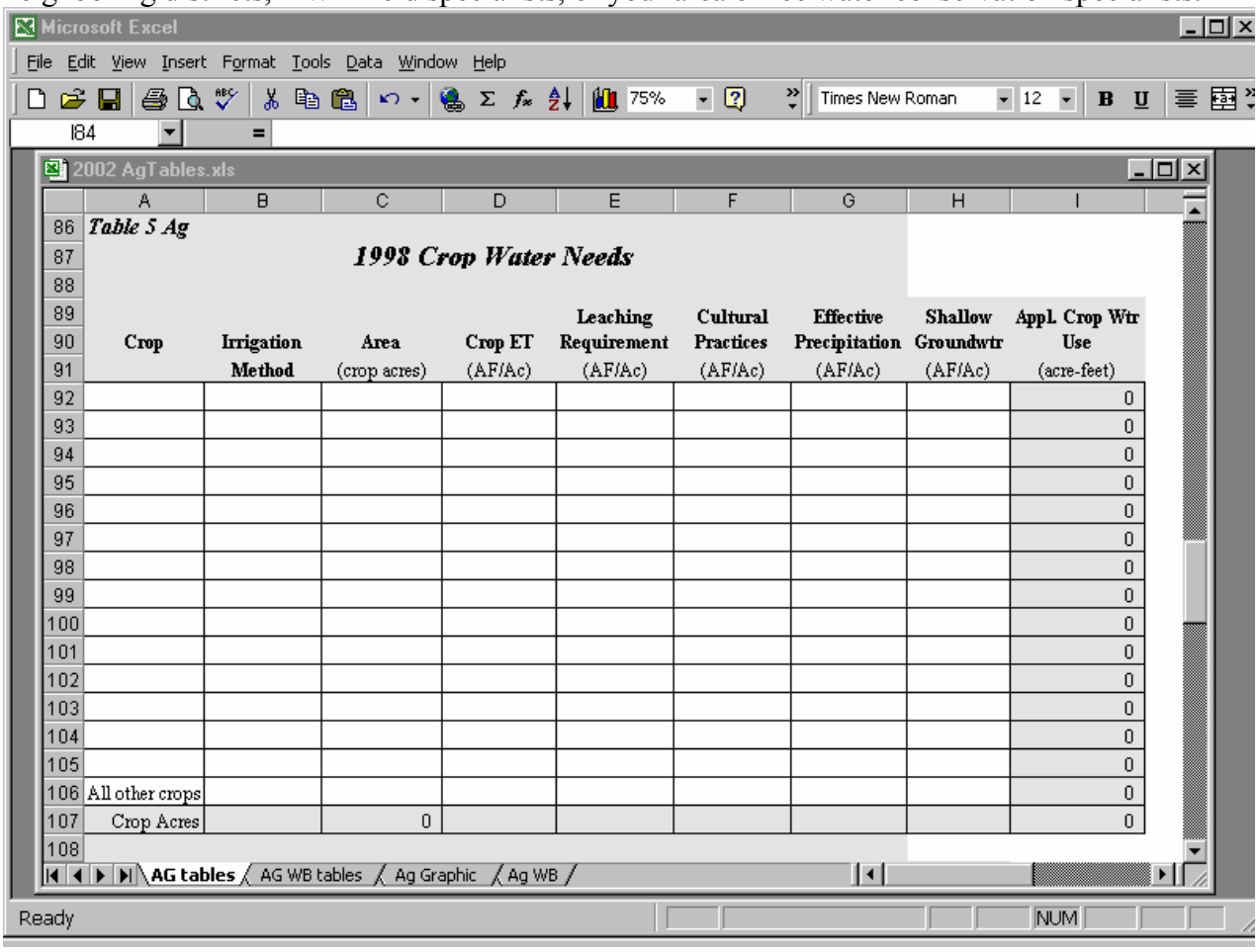


Table 6A. Distribution System Water Budget (this is requested in section 2G).
Much of the data for this table is copied from the previous tables.

Riparian - Estimate the annual consumptive use by riparian vegetation inadvertently or intentionally supplied with contractor water. Do not include riparian vegetation located at an environmental or recreational resource. Estimate the total acres of riparian vegetation and an average water-use rate to obtain an estimate of consumptive use (based on evapotranspiration (ET) during the months when water is available). Information may also be available from local farm advisors and neighboring contractors.

Ground-Water Recharge - Quantify water used by the contractor for the purposeful recharge of ground water, including recharge ponds and water injected for ground-water recharge.

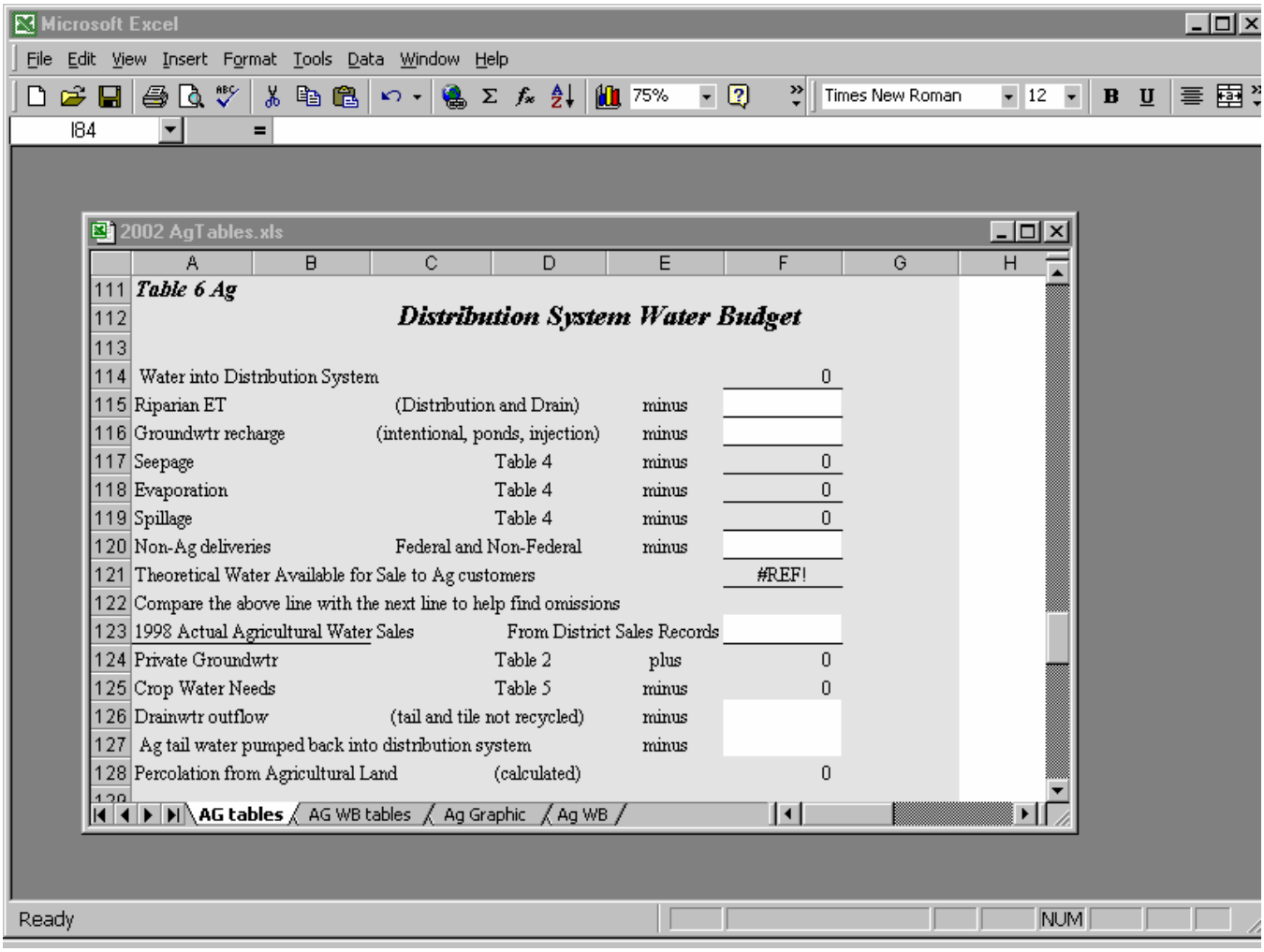
Non-Agricultural Deliveries - Quantify water delivered that was not used for commercial agricultural practices. This includes urban deliveries to municipal water districts and industrial deliveries. A rule of thumb is, if the waste water flows to a central waste water treatment plant after it is delivered and used, then it should be included here.

Recycled Agricultural Water - Quantify all water recovered from agricultural operations, which is put back into the distribution system.

Actual Agricultural Water Sales - From district billing records, quantify the water that was sold for application to the land. This number could be greater than the total supply in Table 3 because of recycling. The same water could flow through the system several times before it is used by plants, evaporates, or is discharged outside district boundaries. Compare this number with the "Theoretical Water Available for Sale to Agricultural Customers" calculated on the previous line. If there is significant difference, look for omissions. These two numbers provide an indication of estimation accuracy.

Drain Water Outflow - Quantify the drain water that leaves the district boundaries from surface ditches or through a drainpipe. ***While an estimate is acceptable, if the estimate exceeds 100 AF per year per site, installation of an outflow measurement device is highly recommended. Reliable outflow data is one of the key components of an accurate water budget and water balance. Districts are encouraged to begin planning for outflow measurement. With increasing concerns related to drain water quality, there is potential for more emphasis to be placed on accurate outflow data reporting in the near future.***

The final line on this table is a rough estimate of the amount of water applied to the land that continues down past the root zone (deep percolation). Since a portion of this water could be recovered by ground-water pumping, the amount of deep percolation may be larger than the total surface supply from Table 1.


Microsoft Excel
File Edit View Insert Format Tools Data Window Help
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I84
2002 AgTables.xls
Table 6 Ag
Distribution System Water Budget
Water into Distribution System 0
Riparian ET (Distribution and Drain) minus
Groundwtr recharge (intentional, ponds, injection) minus
Seepage Table 4 minus 0
Evaporation Table 4 minus 0
Spillage Table 4 minus 0
Non-Ag deliveries Federal and Non-Federal minus
Theoretical Water Available for Sale to Ag customers #REF!
Compare the above line with the next line to help find omissions
1998 Actual Agricultural Water Sales From District Sales Records
Private Groundwtr Table 2 plus 0
Crop Water Needs Table 5 minus 0
Drainwtr outflow (tail and tile not recycled) minus
Ag tail water pumped back into distribution system minus
Percolation from Agricultural Land (calculated) 0
AG tables
AG WB tables
Ag Graphic
Ag WB
Ready
NUM

Table 7A. Influence on Ground Water and Saline Sink (this is requested in section 2G). The first part of this table compares the estimated influence on ground water from the district with the actual change in the ground-water storage. There may be a large difference in the quantities. The comparison indicates the impact of district operation on ground water.

The second part estimates the water that flows to a perched water table or saline sink and is no longer available for agriculture. Examples are flows to evaporation ponds, saline ground water, or perched water tables where the water is not reused. This water could be reduced by implementing BMPs. Conservation may not be reasonable or practical. In some cases, this water may be beneficial in some other way. Districts should provide a statement about how much of this water appears to be available for conservation, if improvements were funded. This statement will help Reclamation and the district find the most effective areas to apply conservation program funds.

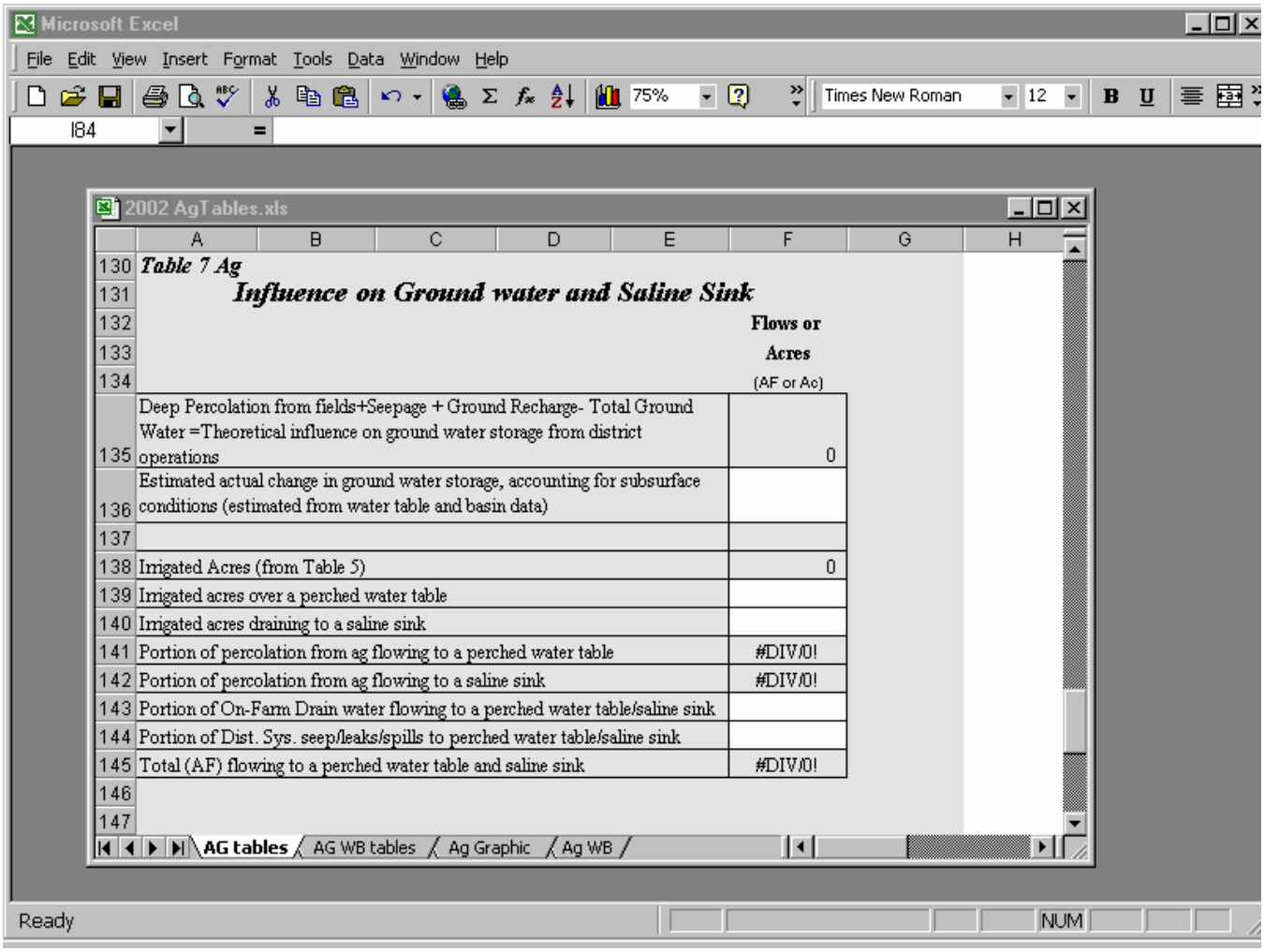

Table 8A. Annual Water Quantities Delivered Under Each Right or Contract (this information is requested in section 2A and C).
Quantify the amount of each type of surface water the contractor actually received in each of the last 10 years. If the contractor has sources of surface water that are not listed in the table, add the necessary data in the "Other" column.

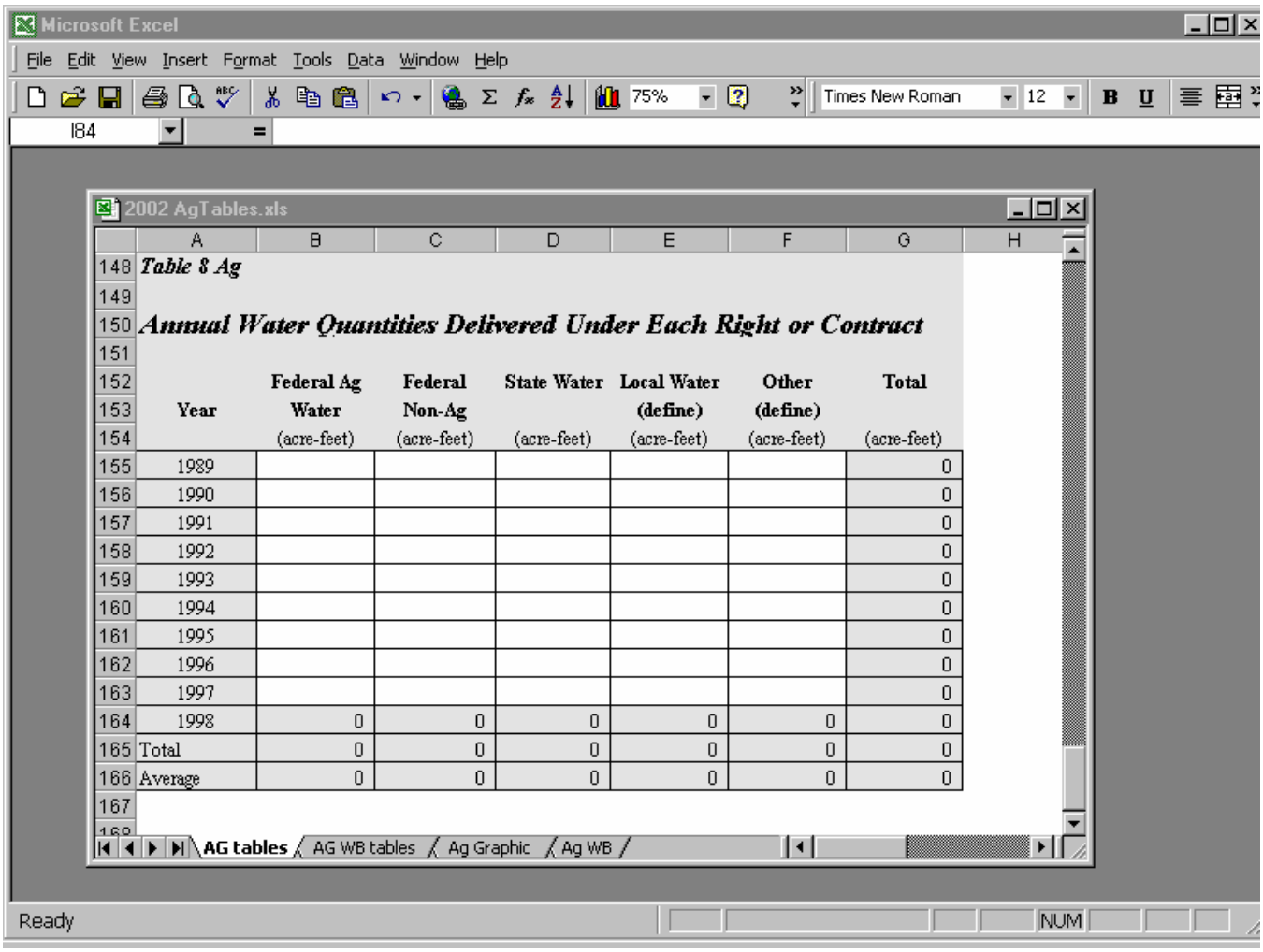

Table 8 Ag

Annual Water Quantities Delivered Under Each Right or Contract

Year	Federal Ag Water (acre-feet)	Federal Non-Ag (acre-feet)	State Water (acre-feet)	Local Water (define) (acre-feet)	Other (define) (acre-feet)	Total (acre-feet)
1989						0
1990						0
1991						0
1992						0
1993						0
1994						0
1995						0
1996						0
1997						0
1998	0	0	0	0	0	0
Total	0	0	0	0	0	0
Average	0	0	0	0	0	0